THE JOURNAL OF THE INTERNATIONAL SOCIETY OF ELECTROCHEMISTRY ISSN 0013-4686

ELECTROCHIMICA Acta

Editor-in-Chief: R. D. ARMSTRONG, University of Newcastle upon Tyne, England
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FIVE-YEAR SUBJECT INDEX

1985–1989

PERGAMON PRESS
Oxford New York
Beijing Frankfurt São Paulo Sydney Tokyo Toronto

ELECTROCHIMICA ACTA

Published by Pergamon Press plc for the International Society of Electrochemistry (I.S.E.)

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Publishing and Advertising Offices: Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, U.K. (*Tel:* +44 865 64881; *Fax:* +44 865 741356), and Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A. Annual institutional subscription rate (1990): DM 1500.00. Two-year institutional rate (1990/91): DM 2850.00. Personal subscription rate for those whose library subscribes at the regular rate (1990): DM 231.00. Prices are subject to change without notice. Issued free to paid-up members of the International Society of Electrochemistry (ISE). Subscription enquiries from customers in North America should be sent to: *Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A.*, and for the remainder of the world to: *Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, U.K.*

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(00254)

Subscription Information

1990: Volume 14 (4 issues)

Annual subscription (1990) DM 640.00

Two-year rate (1990/91) DM 1216.00

ISSN: 0364-5916

PERGAMON PRESS

Member of Maxwell Macmillan Pergamon Publishing Corporation

Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, UK

Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, USA

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K H CHOW & M B COMISAROW (Canada), Magnitude-Lorentzian interpolation of discrete, absorption-mode Fourier transform spectra.

Indexed/Abstracted in: *Curr Cont ASCA/Phy Chem & Earth Sci/Sci Cit Ind/SCISEARCH Data, Chemical Abstracts Service, Comput Cont, BIOSIS Data, Engng Ind Monthly & Author Index, PASCAL-CNRS Data, Soft Rev on File, INSPEC Data, Cam Sci Abstr, Curr Cont CompuMath, SSSA/CISA/ECA/ISMEC, TCEA, Info Sci Abstr*

(00379)
Subscription Information
1990: Volume 14 (4 issues)
Annual subscription (1990) DM 620.00
Two-year rate (1990/91) DM 1178.00
ISSN: 0097-8485

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R E VAN DE LEEST (The Netherlands), The indoor exposure of thin sputtered copper-aluminium films.
K RIPPSTEIN & H KAESCHE (FRG), The stress corrosion cracking of a reactor pressure vessel steel in high temperature water at high flow rates.
L A KAMEL, S M ROSHDY & R ABOU SHAHBA (Egypt), The behaviour of chromium amalgams in oxalic acid solutions.
S B LYON & F A EL-GBAR (UK), Electrochemical detection of hydrogen using a solid-state probe.
P MARCUS & H TALAH (France), The sulphur-induced breakdown of the passive film and pitting studied on nickel and nickel alloys.

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(00260)
1990: Volume 30 (12 issues)
Annual subscription (1990) **DM 930.00**
Two-year rate (1990/91) **DM 1767.00**
ISSN: 0010-938X

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R D GILLARD & J D PEDROSA DE JESUS (UK), Optically active coordination compounds-XLIX. The *cis*-bis-aquo-bis-1,2-diaminoethanerhodium(III) system.
S LIU & J ZUBIETA (USA), Polyoxomolybdate-hydrocarbon interactions. Synthesis and structure of $[(n\text{-}C_4H_9)_4N][Mo_2O_5(C_8H_{13}O_5)] \cdot 0.5(C_2H_5)_2O$, from the reaction of 3-hydroxy-2-butanone with $[(n\text{-}C_4H_9)_4N]_2[Mo_2O_7]$.
W RADECKA-PARYZEK (Poland), The yttrium ion as a template in the synthesis of the macrocyclic and acyclic complexes formed in the reactions with 2,6-diacetylpyridine and hydrazine.
C J COETZEE (South Africa), Determination of formation constants of copper(II) dicarboxylates with a solid state copper(II) ion-selective electrode.
J L WALSH & C C YANCEY (USA), Acceleration of ligand exchange by coordinated nitrate in polypyridyl ruthenium complexes.
K K PANDEY& S K TEWARI (India), Reactions of carbonyl sulphide and carbon disulphide with ruthenium complexes.

Indexed/Abstracted in: *Curr Cont ASCA/Phy Chem & Earth Sci/SCISEARCH Data/Sci Cit Ind, Chemical Abstracts Service, BIOSIS Database, INSPEC Data*

(00218)
Subscription Information
1990: Volume 9 (24 issues)
Annual subscription (1990) DM 2420.00
Two-year rate (1990/91) DM 4598.00
ISSN: 0277-5387

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Editor-in-Chief: **J D R THOMAS,** *School of Chemistry & Applied Chemistry, Redwood Building, University of Wales, College of Cardiff, King Edward VII Avenue, P O Box 13, Cardiff CF1 3XF, Wales*

Selective Electrode Reviews is generated by the enormous world-wide growth of interest in electrochemical sensors, and especially with the effort of making these selective by special designs of electrode membranes for direct sensing and of secondary membranes, based on enzyme and immuno systems, which by selective action yield products which can be sensed by a more general electrode. It is aimed to set progress in development and fundamentals alongside applications so as to emphasize interdisciplinary importance.
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The journal is addressed to all with interests where electrochemical sensing with selective electrodes and selective membranes and surfaces in the widest sense can promote advances in scientific knowledge or can facilitate monitoring, not only of primary species in samples, but also of samples upon which supplementary treatment stages can yield detectable ionic or molecular species.

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P BERGVELD & B H VAN DER SCHOOT (The Netherlands), A classification of chemical sensors as electronic components.
G G GUILBAULT (USA) & **M MASCINI** (Italy), Conference report: Analytical uses of immobilized biological compounds: Detection, medical and industrial uses.
R GASSER (UK), Advances in construction and methods of application of calcium ion-selective microelectrodes.
G J MOODY, B B SAAD & J D R THOMAS (UK), The development of polymer matrix membranes for ion-selective electrodes.
T P BYRNE (FRG), Ion-selective electrodes in direct potentiometric clinical analysers.

Indexed/Abstracted in: *Curr Cont ASCA/Phy Chem & Earth Sci/Ind Sci Rev/Sci Cit Ind/ SCISEARCH Data, Chemical Abstracts Service, Engng Ind Monthly & Author Index*

(00540)
Subscription Information
1990: Volume 12 (2 issues)
Annual subscription (1990) DM 265.00
Two-year rate (1990/91) DM 503.50
ISSN: 0894-3923

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SPECTROCHIMICA ACTA

Part A: Molecular Spectroscopy

Editors: **SIDNEY F A KETTLE,** *School of Chemical Sciences, University of East Anglia, Norwich NR4 7TJ, UK* and **JEFFREY I STEINFELD,** *Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA 02139, USA*

This international journal is intended for the rapid publication of original work dealing with molecular spectroscopy, and its application in chemical problems. Subject areas include infrared, visible, ultraviolet, Raman, microwave, and photoelectron spectroscopy, nuclear magnetic and electric spin resonance, optical rotatory dispersion and magnetic circular dichroism, and neutron and light scattering. In addition to fundamental papers on molecular structure and interactions, papers dealing with applications in areas such as qualitative and quantitative analysis, surface spectroscopy, non-linear optics, laser photochemistry, aeronomy and extra-terrestrial spectroscopy, instrumentation, and biochemistry are also published.

A Selection of Papers
S F A KETTLE, E LUGWISHA (UK), **J ECKERT & N K McGUIRE** (USA), Intermolecular vibrational coupling in glycine.
K OHWADA (Japan), Application of potential constants: Empirical determination of molecular energy components for diatomic molecules.
B O FIELD & J E D SPENCER (UK), Inelastic electron tunnelling spectroscopy-V. The formation of molecules of bioevolutionary importance on an alumina surface.
G G DUMAS, G LACRAMPE, M-P CHEDIN & M JAFFRAIN (France), Polariton splittings of deuterated hexamethylenetetramine.
G FAVARO, F MASETTI & A ROMANI (Italy), Effect of pH on the absorption and emission characteristics of di(3-pyridyl)ketone.

New Patents and Software Survey sections are included in this journal

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(00213)
Subscription Information
1990: Volume 46A (12 issues)
Annual subscription (1990) DM 1350.00
Two-year rate (1990/91) DM 2565.00
ISSN: 0584-8539

PERGAMON PRESS
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INSTRUCTIONS TO AUTHORS SUBMITTING SHORT COMMUNICATIONS IN CRC-FORM TO *ELECTROCHIMICA ACTA*

Electrochimica Acta offers authors a medium for rapid publication of Short Communications, to **be printed by direct reproduction from the authors typescript.** Such manuscripts should be typed in accordance with these guidelines on the specially prepared laysheets which can be obtained from the Editor-in-Chief or direct from the Pergamon office at Oxford (see addresses on the inside front cover of *Electrochimica Acta*).

These notes and those on the laysheets are intended to supplement the general guidance on manuscript preparation contained in the Guide to Authors inside each issue of *Electrochimica Acta*.

Manuscripts should be up to 4 pages long, and with an even number of pages if possible to avoid wasted space.

Instructions for Typing

1. The sample sheet given overleaf shows the general layout of the first page which has been typed on a special laysheet and reproduced by photo-offset to 75% of the original size. This sample used a "golf-ball" typewriter such as is produced by all the major manufacturers. Other suitable machines include IBM composers, word processors or Compugraphic typesetters. Any good-quality electric typewriter can also be used provided the characters are properly cleaned and a carbon ribbon or new black ribbon is fitted.

2. The use of laysheets will assist in assuring the correct format, but good-quality white bond paper can be used provided the layout and dimensions are followed exactly. The typing area of each sheet is 19.5 cm wide × 31 cm deep.

3. The first page carries the title, authors' names, authors' addresses and abstract, all of which are centred on the page with a maximum line width of 15 cm. The heading "Short Communication" will be typeset by the publisher. The received date will be typed in by the Editor.

   The *title* is in capitals on a line 2.0 cm from the top of the typing area. Any further lines are double-spaced. The *authors' names* are in capitals on a line 3.5 cm from the top with further lines double-spaced. Mark with an asterisk the surname of the author to whom correspondence should be addressed. The *authors' addresses* are in capitals and small letters on a line 4.5 cm from the top with further lines double-spaced.

   The *abstract*, of up to 50 words, commences 8 cm from the top and should be typed in single-spacing.

   The *text* commences 2 lines under the abstract. *Introduction*, *Experimental* and *Discussion sections* are typed in 1½-spacing. The *figure captions*, *tables* and *table headings*, *footnotes*, *reference lists* and *acknowledgements* should be single-spaced.

4. *Formulae*, *graphs* and other *figures* should be carefully drawn in black ink, preferably on a separate sheet which is then pasted into the text. It may be convenient to use a bromide print (not a photocopy) of the original drawing. Lettering should preferably be prepared using a stencil system (such as Leroy or Kent—obtainable from Pergamon Oxford office) and should be in capitals and small letters. The size of lettering and thickness of line should take account of the reduction of 25%. Thin lines (grid lines, scale gradations) should be drawn about 0.1 mm; medium lines (borders, broken graph lines) about 0.2 mm; thick lines (solid curves) about 0.4 mm. When pasting allow about 1 cm space at the top, 1 cm between the bottom and the caption and 1 cm below the caption. The caption should be centred below the illustration and single-spaced if more than one line.

   Structural formulae and stereochemical representations should be prepared using appropriate stencils. The Universal Stencil size 5 which is available from Verlag-Chemie is recommended with an 0.5 mm pen.

5. *Tables* should be arranged to read vertically. Allow a 3-line space above the table heading (which should itself be single-spaced) and a 3-line space below the foot of the table. Type or draw a continuous rule above and below the column headings and at the foot of the table.

6. Where possible, figures, schemes and tables should be positioned side by side, in order to save space.

7. References should be indicated in the text by consecutive arabic numbers in parentheses, typed on the same line as the text.

8. Running headlines, catchlines and pagination will be typeset by the publisher. The authors' names and the page number should be written in light blue pencil on each page.

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SPECIMEN PAGE ONLY

THE MINIMUM VALUE OF THE DIFFERENTIAL CAPACITY OF GALLIUM AT NEGATIVE CHARGES

L. DOUBOVA, A. DE BATTISTI

Department of Chemistry, University of Ferrara,
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University of Milan, Via Venezian 21, 20133 Milan, Italy

(Received)

Abstract - The minimum values of the differential capacity of Ga at negative charges has been found to be systematically higher than that of Hg by about 20%. These results, in close agreement with recent chronocoulometric experiments, cause the relation between the structure of the interface at Hg and that at Ga to be looked at in a different light.

The interpretation of the differential capacity-charge curves of the electrode/aqueous solution interface rests on two pictures of the boundary region between the metal and the liquid phase differing by the role assigned to the solid. In one group of models whose prototype is that proposed by Watts-Tobin (1) the metal depicted as an infinitely conducting solid wall so that the interphase is reduced to a water monolayer. In the other group (2-4), the water monolayer is in contact with a solid whose electronic structure is taken quantitatively into account through the "jellium" model of a metal surface.

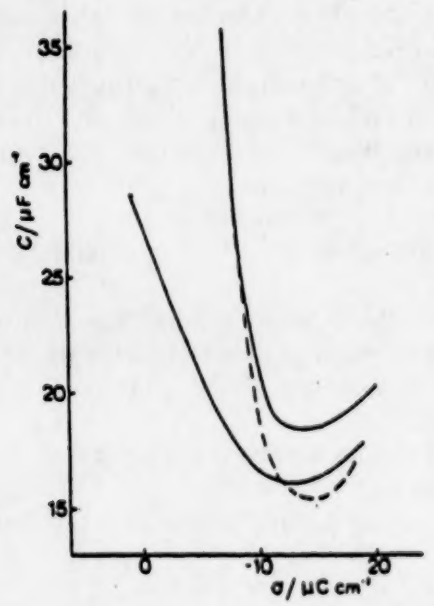

Fig. 1. Differential capacity of dropping Hg and Ga electrodes in 0.5mol dm^{-3} Na_2SO_4 solution. (——) This work; (----) from Ref. (16).

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1. R.J. Watts-Tobin, *Phil. Mag.* 6, 133 (1961).
2. J.P. Badiali, M.L. Rosinberg and J. Goodisman, *J. electroanal. Chem.* 130, 31 (1981).
3. M.A. Vorotyntsev and A.A. Kornyshev, *Elektrokhimiya* 20, 3 (1984).
4. W. Schmickler and D. Henderson, *J. chem. Phys.* 80, 3381 (1984).
5. B.B. Damaskin and A.N. Frumkin, *Electrochim. Acta* 19, 173 (1974).

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GUIDE TO AUTHORS

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